

The listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Previously Presented) A method for fabricating a semiconductor device comprising:

crystallizing a semiconductor film over a substrate by a laser beam to obtain a crystalline semiconductor film,

wherein a part of the laser beam transmits through the semiconductor film, and

wherein the incident angle  $\theta$  satisfies

$$\theta \geq \arctan(w / (14 \times D)), (w = (w_1 + w_2) / 2),$$

where  $w_1$  indicates a beam width of the laser beam irradiated onto the semiconductor film,

$w_2$  indicates a beam width of the part of the laser beam at the semiconductor film after reflected by a back surface of the substrate, and

D indicates the thickness of the substrate.

2. (Previously Presented) The method according to claim 1, wherein an energy distribution of the laser beam is uniformed by using long focal length cylindrical lenses at or near an irradiation plane.

3. (Previously Presented) The method according claim 1, wherein the laser beam is linear in shape at or near an irradiation plane, and where linear means a rectangle having a large aspect ratio from 10 to 10000 or an ellipse.

4. (Previously Presented) The method according to claim 1, wherein an energy distribution of the laser beam is uniformed and the laser beam is linear in shape at or near an irradiation plane.

5. (Previously Presented) The method according to claim 1, wherein the laser beam has a wavelength of 350 nm or more.

6. (Previously Presented) The method according to claim 1, wherein the laser beam has a wavelength of 400 nm or more.

7. (Previously Presented) The method according to claim 1, wherein the laser beam is the second harmonic of one kind selected from the group consisting of a YAG laser, a YVO<sub>4</sub> laser, a YLF laser, a YAlO<sub>3</sub> laser, a ruby laser, an alexandrite layer, a Ti:sapphire layer, and a glass laser.

8. (Original) A laser annealing method comprising:  
irradiating a surface of an irradiation target formed over a substrate with a laser beam at an incident angle  $\theta$ ,

wherein a part of the laser beam transmits through the irradiation target,

wherein the incident angle  $\theta$  satisfies

$$\theta \geq \arctan(w / (14 \times D)), (w = (w_1 + w_2) / 2),$$

where  $w_1$  indicates a beam width of the laser beam irradiated onto the irradiation target,  $w_2$  indicates a beam width of the part of the laser beam at the irradiation target after reflected by a back surface of the substrate, and D indicates the thickness of the substrate.

9. (Previously Presented) The method according to claim 8, wherein an energy distribution of the laser beam is uniformed at or near an irradiation plane.

10. (Previously Presented) The method according to claim 8, wherein the laser beam is linear in shape at or near an irradiation plane.

11. (Previously Presented) The method according to claim 8, wherein an energy distribution of the laser beam is uniformed and the laser beam is linear in shape at or near an irradiation plane.

12. (Previously Presented) The method according to claim 8, wherein the laser beam has a wavelength of 350 nm or more.

13. (Previously Presented) The method according to claim 8, wherein the laser beam has a wavelength of 400 nm or more.

14. (Previously Presented) The method according to claim 8, wherein the laser beam is the second harmonic of one kind selected from the group consisting of a YAG laser, a YVO<sub>4</sub> laser, a YLF laser, a YAlO<sub>3</sub> laser, a ruby laser, an alexandrite layer, a Ti:sapphire layer and a glass laser.

15. (Original) A laser annealing method comprising:  
irradiating a surface of an irradiation target formed over a substrate with a laser beam at an incident angle  $\theta$ ,

wherein a part of the laser beam transmits through the irradiation target,

wherein the incident angle  $\theta$  satisfies

$$\theta \geq \arctan(w / (2 \times D)), (w = (w_1 + w_2) / 2),$$

where  $w_1$  indicates a beam width of the laser beam irradiated onto the irradiation target,  $w_2$  indicates a beam width of the part of the laser beam at the irradiation target after reflected by a back surface of the substrate, and D indicates the thickness of the substrate.

16. (Previously Presented) The method according to claim 15, wherein an energy distribution of the laser beam is uniformed at or near an irradiation plane.

17. (Previously Presented) The method according to claim 15, wherein the laser beam is linear in shape at or near an irradiation plane.

18. (Previously Presented) The method according to claim 15, wherein an energy distribution of the laser beam is uniformed and the laser beam is linear in shape at or near an irradiation plane.

19. (Previously Presented) The method according to claim 15, wherein the laser beam has a wavelength of 350 nm or more.

20. The method according to claim 15, wherein the laser beam has a wavelength of 400 nm or more.

21. (Previously Presented) The method according to claim 15, wherein the laser beam is the second harmonic of one kind selected from the group consisting of a YAG laser, a YVO<sub>4</sub> laser, a YLF laser, a YAlO<sub>3</sub> laser, a ruby laser, an alexandrite layer, a Ti:sapphire layer and a glass laser.

22. (Currently Amended) The method according to claim 8, wherein the laser beam is irradiated obliquely in order to prevent ~~an-interfere~~ interference with a reflected laser beam.

23-29. (Cancel)

30. (Previously Presented) A method for fabricating a semiconductor device comprising:

forming a semiconductor film over a substrate; and

crystallizing a semiconductor film by a laser beam to obtain a crystalline semiconductor film,

wherein a part of the laser beam transmits through the semiconductor film, and wherein the incident angle  $\theta$  satisfies

$$\theta \geq \arctan(w / (2 \times D)), (w = (w_1 + w_2) / 2),$$

where  $w_1$  indicates a beam width of the laser beam irradiated onto the semiconductor film,

$w_2$  indicates a beam width of the part of the laser beam at the semiconductor film after reflected by a back surface of the substrate, and

$D$  indicates the thickness of the substrate.

31. (Previously Presented) The method according to claim 30, wherein an energy distribution of the laser beam is uniformed by using long focal length cylindrical lenses at or near an irradiation plane.

32. (Previously Presented) The method according to claim 30, wherein the laser beam is linear in shape.

33. (Previously Presented) The method according to claim 30, wherein an energy distribution of the laser beam is uniformed by using long focal length cylindrical lenses and the laser beam is linear in shape at or near an irradiation plane.

34. (Previously Presented) The method according to claim 30, wherein the laser beam has a wavelength of 350 nm or more.

35. (Previously Presented) The method according to claim 30, wherein the laser beam has a wavelength of 400 nm or more.

36. (Previously Presented) The method according to claim 30, wherein the laser beam is the second harmonic of one kind selected from the group consisting of a YAG laser, a  $\text{YVO}_4$  laser, a YLF laser, a  $\text{YAIO}_3$  laser, a ruby laser, an alexandrite layer, a Ti:sapphire layer and a glass laser.

37. (Previously Presented) The method according to claim 30, wherein the semiconductor film comprises silicon.

38. (Previously Presented) The method according to claim 30, wherein the semiconductor device is incorporated into electronic equipment selected from the group consisting of a personal computer, a video camera, a mobile computer, a goggle type display, a player, a digital camera, a front type projector, a rear type projector, a mobile telephone, a mobile book, and a display.

39. (Previously Presented) A method for fabricating a semiconductor device comprising:

forming a semiconductor film over a substrate; and

irradiating a surface of the semiconductor film with a laser beam at an incident angle  $\theta$ ,

wherein a part of the laser beam transmits through the semiconductor film, and

wherein the incident angle  $\theta$  satisfies

$$\theta \geq \arctan(w / (14 \times D)), (w = (w_1 + w_2) / 2),$$

where  $w_1$  indicates a beam width of the laser beam irradiated on the semiconductor film,  $w_2$  indicates a beam width of the part of the laser beam at the

semiconductor film after reflected by a back surface of the substrate, and D indicates the thickness of the substrate.

40. (Previously Presented) The method according to claim 39, wherein an energy distribution of the laser beam is uniformed by using long focal length cylindrical lenses at or near an irradiation plane.

41. (Previously Presented) The method according to claim 39, wherein the laser beam is linear in shape.

42. (Previously Presented) The method according to claim 39, wherein an energy distribution of the laser beam is uniformed by using long focal length cylindrical lenses and the laser beam is linear in shape at or near an irradiation plane.

43. (Previously Presented) The method according to claim 39, wherein the laser beam has a wavelength of 350 nm or more.

44. (Previously Presented) The method according to ~~claims~~ claim 39, wherein the laser beam has a wavelength of 400 nm or more.

45. (Previously Presented) The method according to claim 39, wherein the laser beam is the second harmonic of one kind selected from the group consisting of a YAG laser, a YVO<sub>4</sub> laser, a YLF laser, a YAlO<sub>3</sub> laser, a ruby laser, an alexandrite layer, a Ti:sapphire layer and a glass laser.

46. (Previously Presented) The method according to ~~claims~~ claim 39, wherein the semiconductor film comprises silicon.

47. (Previously Presented) The method according to ~~claims~~ claim 39, wherein the semiconductor device is incorporated into electronic equipment selected from the group consisting of a personal computer, a video camera, a mobile computer, a goggle type display, a player, a digital camera, a front type projector, a rear type projector, a mobile telephone, a mobile book, and a display.

48. (Original) A method for fabricating a semiconductor device comprising:  
forming a semiconductor film over a substrate; and  
irradiating a surface of the semiconductor film with a laser beam at an incident angle  $\theta$ ,

wherein a part of the laser beam transmits through the semiconductor film,

wherein the incident angle  $\theta$  satisfies

$$\theta \geq \arctan(w / (2 \times D)), (w = (w_1 + w_2) / 2),$$

where  $w_1$  indicates a beam width of the laser beam irradiated on the semiconductor film,  $w_2$  indicates a beam width of the part of the laser beam at the semiconductor film after reflected by a back surface of the substrate, and  $D$  indicates the thickness of the substrate.

49. (Previously Presented) The method according to claim 48, wherein an energy distribution of the laser beam is uniformed by using long focal length cylindrical lenses at or near an irradiation plane.

50. (Previously Presented) The method according to claim 48, wherein the laser beam is linear in shape.

51. (Previously Presented) The method according to claim 48, wherein an energy distribution of the laser beam is uniformed by using long focal length cylindrical lenses and the laser beam is linear in shape at or near an irradiation plane.



52. (Previously Presented) The method according to claim 48, wherein the laser beam has a wavelength of 350 nm or more.

53. (Previously Presented) The method according to ~~claims~~ claim 48, wherein the laser beam has a wavelength of 400 nm or more.

54. (Previously Presented) The method according to claim 48, wherein the laser beam is the second harmonic of one kind selected from the group consisting of a YAG laser, a YVO<sub>4</sub> laser, a YLF laser, a YAlO<sub>3</sub> laser, a ruby laser, an alexandrite layer, a Ti:sapphire layer and a glass laser.

55. (Previously Presented) The method according to claim 48, wherein the semiconductor film is a film containing silicon.

56. (Previously Presented) The method according to claim 48, wherein the semiconductor device is incorporated into electronic equipment selected from the group consisting of a personal computer, a video camera, a mobile computer, a goggle type display, a player, a digital camera, a front type projector, a rear type projector, a mobile telephone, a mobile book, and a display.

57. (Currently Amended) A method for fabricating a semiconductor device according to claim 1, wherein the laser beam is irradiated obliquely in order to prevent ~~an interfere~~ an interference with a reflected laser beam.

58-66. (Cancel)

67. (Currently Amended) A laser annealing method according to claim 15, wherein the laser beam is irradiated obliquely in order to prevent ~~an—interfere~~ interference with a reflected laser beam.

68. (Currently Amended) A method for fabricating a semiconductor device according to claim 30, wherein the laser beam is irradiated obliquely in order to prevent ~~an—interfere~~ interference with a reflected laser beam.

69. (Currently Amended) A method for fabricating a semiconductor device according to claim 39, wherein the laser beam is irradiated obliquely in order to prevent ~~an—interfere~~ interference with a reflected laser beam.

70. (Currently Amended) A method for fabricating a semiconductor device according to claim 48, wherein the laser beam is irradiated obliquely in order to prevent ~~an—interfere~~ interference with a reflected laser beam.